

Amendments to the Claims:

Please cancel claims 1 - 20 without prejudice or disclaimer of the subject matter thereof and add the following new claims.

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 - 20 (canceled)

21. (new) An ultrasonic diagnostic apparatus comprising:

a tomographic image construction unit for constructing grayscale tomographic images including a predetermined area of tissue of an object to be examined by repeatedly transmitting ultrasonic waves to the object at time intervals, and receiving time-series reflected echo signals from the object including the predetermined area;

an elasticity image construction unit for constructing color elasticity images by measuring displacement of tissue of the object based on the time-series reflected echo signals;

an image composition unit for generating composite images of the color elasticity image and the gray scale tomographic image including the predetermined area; and

a display unit for displaying a stiff area of the tissue of the object in the color elasticity image in relation to the predetermined area of the tissue of the object in the grayscale tomographic image so as to enable comparison of a spread condition of the stiff area of the tissue of the object in the color elasticity image with respect to

the predetermined area of the tissue of the object in the grayscale tomographic image, whereby diagnosis of a condition of the tissue of the object is enabled.

22. (new) The ultrasonic diagnostic apparatus according to claim 21, wherein the image composition unit utilizes luminance information of the tomographic image as three primary colors of light, and adds the information to hue information of the color elasticity image at a set rate.

23. (new) The ultrasonic diagnostic apparatus according to claim 21, wherein the elasticity image construction unit generates a color elasticity image of the predetermined area of the tissue of the object which is set in advance.

24. (new) The ultrasonic diagnostic apparatus according to claims 21, wherein the image composition unit comprises means to variably set at least one of the set rate and the predetermined area of the tissue of the object.

25. (new) The ultrasonic diagnostic apparatus according to claim 21, wherein the elasticity image construction unit constructs the color elasticity image by calculating displacement of the tissue of the object as the elasticity information, and converting the elasticity information having small displacement into a blue color code.

26. (new) The ultrasonic diagnostic apparatus according to claim 21, wherein the elasticity image construction unit constructs the color elasticity image by calculating displacement of the tissue of the object as the elasticity information, and converting the elasticity information having large displacement into a red color code.

27. (new) The ultrasonic diagnostic apparatus according to claim 21, wherein the image composition unit converts (Tomographic image data) $_{i,j}$ of coordinate (i,j) into (Tomographic image data R) $_{i,j}$, (Tomographic image data G) $_{i,j}$ and (Tomographic image data B) $_{i,j}$ of three primary colors RGB as expressed in formula 1 below, and adds (Elasticity image data R) $_{i,j}$, (Elasticity image data G) $_{i,j}$ and (Elasticity image data B) $_{i,j}$ of the three primary colors RGB with respect to each coordinate (i,j) constituting the elasticity information of the color elasticity image at a set rate α as expressed in formula 2 below, and generates the composite image of (Composite image data R) $_{i,j}$, (Composite image data G) $_{i,j}$ and (Composite image data B) $_{i,j}$.

[Formula 1]

$$\begin{aligned}(\text{Tomographic image data R})_{i,j} &= (\text{Tomographic image data})_{i,j} \\(\text{Tomographic image data G})_{i,j} &= (\text{Tomographic image data})_{i,j} \\(\text{Tomographic image data B})_{i,j} &= (\text{Tomographic image data})_{i,j}\end{aligned}$$

[Formula 2]

$$\begin{aligned}(\text{Composite image data R})_{i,j} &= (1 - \alpha) \times (\text{Tomographic image data R})_{i,j} \\&+ \alpha \times (\text{Elasticity image data R})_{i,j} \\(\text{Composite image data G})_{i,j} &= (1 - \alpha) \times (\text{Tomographic image data G})_{i,j} \\&+ \alpha \times (\text{Elasticity image data G})_{i,j} \\(\text{Composite image data B})_{i,j} &= (1 - \alpha) \times (\text{Tomographic image data B})_{i,j} \\&+ \alpha \times (\text{Elasticity image data B})_{i,j}\end{aligned}$$

28. (new) The ultrasonic diagnostic apparatus according to claim 22, wherein the elasticity image construction unit generates a color elasticity image of the predetermined area of the tissue of the object which is set in advance.

29. (new) The ultrasonic diagnostic apparatus according to claim 21, wherein the elasticity image construction unit includes a pressure measuring unit for measuring information of pressure applied to the object in accordance with manual displacement of the tissue of the object for construction of the color elasticity image of the tissue of the object.

30. (new) The ultrasonic diagnostic apparatus according to claim 29, wherein the elasticity image construction unit constructs the color elasticity image by calculating displacement of the tissue of the object in accordance with the pressure information as the elasticity information, and converting the elasticity information having small displacement into a blue color code.

31. (new) The ultrasonic diagnostic apparatus according to claim 29, wherein the elasticity image construction unit constructs the color elasticity image by calculating displacement of the tissue of the object in accordance with the pressure information as the elasticity information, and converting the elasticity information having large displacement into a red color code.

32. (new) The ultrasonic diagnostic apparatus according to claim 21, wherein the image composition unit includes a selecting unit for selecting a plurality of arbitrary images from among the color elasticity images and the gray scale tomographic images.

33. (new) The ultrasonic diagnostic apparatus according to claim 21, wherein the display unit displays the tomographic image and the composite image on a same screen.

34. (new) The ultrasonic diagnostic apparatus according to claim 21, wherein the image composition unit includes means for overlapping the tomographic image and the color elasticity image so as to generate a translucent composite image on the basis of an overlapping ratio.

35. (new) The ultrasonic diagnostic apparatus according to claim 34, wherein the image composition unit generates the translucent composite image by determining the overlapping ratio between the tomographic image and the color elasticity image on a basis of elasticity information calculated by the elasticity image construction unit.

36. (new) The ultrasonic diagnostic apparatus according to claim 21, wherein the image composition unit includes means for variably setting a region of interest (R01) of the color elasticity image and forms a translucent composite image of the R01.

37. (new) An ultrasonic diagnostic apparatus comprising:

a tomographic image construction unit for constructing grayscale tomographic images including a predetermined area of tissue of an object to be examined by repeatedly transmitting ultrasonic waves to the object at time intervals, and receiving time-series reflected echo signals from the object including the predetermined area;

an outline image construction unit for constructing an outline image by measuring displacement of tissue of the object based on the time-series reflected echo signals and calculating elasticity information;

an image composition unit for generating composite images of the outline image and the gray scale tomographic image including the predetermined area; and

a display unit for displaying a stiff area of the tissue of the object in the outline image in relation to the predetermined area of the tissue of the object in the grayscale tomographic image so as to enable comparison of a spread condition of the stiff area of the tissue of the object in the outline image with respect to the predetermined area of the tissue of the object in the grayscale tomographic image, whereby diagnosis of a condition of the tissue of the object is enabled.

38. (new) The ultrasonic diagnostic apparatus according to claim 37, wherein the outline image construction unit outlines a plurality of areas of the tissue of the object on the basis of at least one threshold.

39. (new) The ultrasonic diagnostic apparatus according to claim 37, wherein the outline image construction unit outlines areas of the tissue of the object on the basis of a plurality of thresholds.

40. (new) The ultrasonic diagnostic apparatus according to claim 37, wherein the outline image construction unit constructs color outline images.

41. (new) The ultrasonic diagnostic apparatus according to claim 40, wherein the outline image construction unit includes a pressure measuring unit for measuring

information of pressure applied to the object in accordance with manual displacement of the tissue of the object for construction of the color outline image of the tissue of the object.